



CRIMINAL INVESTIGATION DEPARTMENT  
WEST BENGAL

Request for Expression of Interest (REOI)

For Setting up Forensic DNA Profiling Laboratory in CID, West Bengal

Memo No. 316 Y /MOD/4375/CID, WB

Dated: 27/6/22

1. CID, West Bengal intends to set up a Forensic DNA Profiling Laboratory in CID, West Bengal for forensic capacity building of State Police. CID, West Bengal, is the specialized investigating agency of the State. For this, it procures quality equipments and accessories for scientific aid in investigation through fair, transparent and competitive bidding process.
2. The objective of the Expression of Interest (Eoi) is to shortlist firms for issue of Request for Proposal (RFP) for setting up a Forensic DNA Profiling Laboratory for CID, West Bengal, on turnkey basis.
3. As per the assessment the instrument required for the DNA Profiling Laboratory are as follows:

Sl. No.	Requirements
1	Fluorescence capillary electrophoresis (upgradable) along with all hardware and software needed for generating DNA profiles from different types of forensic / wildlife samples.
2.	Bench top DNA extraction system based on pre-filled cartridge extraction principle with capability to extract DNA from at least 10 samples or more at a time. System should automate the DNA isolation steps of binding, washing and elution. The system should have capability to elute the extracted DNA in selectable volumes from 20ul to 250ul
3.	DNA quantitation system should be latest generation, peltier based thermal cycling system that supports standard 96 well format plates or 0.2 ml tubes (individuals or 8 trips) and should have ramp rate of the system at 6°C/sec. The instrument software should have flexibility of the virtual Standard feature and should calculate degradation index.
4.	End point PCR should be of 96 well block for 96 X 0.2 ml reaction tubes or 96 well reaction plates with 6 separate peltier blocks/ zones.
5.	Mini centrifuge having 2 different rotors for 12 x 1.5/2.0 mL tubes and 2 x 8 PCR tube stripes having Speed up to 14,100 x g (14,500 rpm), Metal rotor housing.

6.	Thermomixer for heating and mixing in 2.0 mL reaction vessels Efficient mixing up to 1,500 rpm, Excellent mixing performance with Anti-spill technology.
7.	Vortex machine with tubes and plate vortex capability.
8.	Five Micro Pipettes with stand viz 0.5µL - 10 µL, 2µL - 20 µL, 10 µL - 100 µL, 20 µL - 200 µL, 100 µL - 1000 µL.
9.	Deep freezer 1 nos. (of -20° C, horizontal) and 1 nos. (of -80° C, vertical) with high density PUF insulation approx 400 Litre capacity and preferably two different doors.
10.	2-8 Deg C Refrigerators vertical cabinet type having 400-500 Litre capacity and digital display.
11.	Water purification system capable of producing type 1 ultrapure water (18.2 MΩ.cm resistivity at 25° C and < 10 ppb total organic carbon) on demand directly from potable tap water. Should be available with a built-in 185 and 254 nm UV lamp for production of low TOC water required by organic-sensitive applications. Should produce Type 3 (Reverse Osmosis) water for basic lab applications at a flow rate of 3, 5, or 8 liters per hour at 15° C and Type 3 water is easily available from the 6L built-in reservoir, or the external 30/60 L reservoirs. Maintenance reduced to a single cartridge change once or twice a year.
12.	Tissue/Bone/Tooth freezer/mixer mill having reproducible, efficient grinding, mixing and homogenization in seconds, powerful grinding by impact and friction, up to 30 Hz for up to 20 samples per run using disposable tubes, 3 different grinding modes (dry, wet or cryogenic), for leak-proof grinding, wide range of accessories including various jar and ball sizes, adapter racks, grinding tool materials, cryokit.
13.	Ph meter, vertical autoclave and digital balance to measure upto 0.001 mg accurately and horizontal gel electrophoresis system.
14.	Refrigerated, Microprocessor controlled, multi rotor compatible Table top centrifuge with variable RCF value, Max. RCF approx 20,000 x g, Max. Capacity: For Fixed Angle Rotor 6 x 100 ml with 13000 rpm; For Swingout Bucket Rotor 4 x 400 ml with approx 5000 rpm capability and a plate rotor to spin at least 6 standard plate with 4000 rpm should be included. Carbon fiber rotor and auto lock technology should be preferable.

4. The expected average case load per day is 80 to 100 nos.

5. The work is to be completed within 6 months of signing of contract.

6. CID, West Bengal, now invites eligible bidders to indicate their interest in providing this service.

7. Interested firms must provide information indicating that they are qualified to perform the service [(brochures, description of similar assignments undertaken by the firm with case load, infrastructure/facilities available with them which are essential to carry out such assignment with such case load, general qualifications & experience, annual financial turn over for last three financial year i.e. 2018-19, 2019-20 & 2020-21 and so forth).

8. The Eols submitted by the firms in association or consortium should clearly indicate the name of the lead firm.

9. The shortlisted firms may be asked to make a presentation of their available facilities, manpower, capabilities, past experiences, etc.

10. After such presentation, if any, CID, West Bengal, will come up with a detailed RFP including both Technical and Financial Proposals.

11. The Eols must reach the below mentioned address not later than 5 PM of 12<sup>th</sup> July, 2022.

CID, West Bengal,  
Bhabani Bhawan, Alipore,  
Kolkata-700027.

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Adl. Director General of Police,  
CID, West Bengal.